



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Nathan G. Clark, et al.

Attorney Docket: 990471U2

Serial No.: 09/810,792

Group Art Unit: 3641

Filed: March 16, 2001

Examiner: Nelson, Peter A.

For: **OIL WELL PERFORATOR LINER WITH
HIGH PROPORTION OF HEAVY METAL**

**RESPONSE TO FINAL OFFICE ACTION
OF MARCH 25, 2003**

Mail Stop Non-Fee Amendment
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

RECEIVED
MAY 21 2003
GROUP 3600

11/1/03
5/22/03
Hobbs
Bates
10/7

In response to the Final Office Action mailed March 25, 2003, please amend the application as follows:

In the Claims:

DO NOT ENTER
5/29/03

Claim 1. (Currently Amended) A shaped charge comprising:
a casing for a shaped charge;
an explosive material disposed within the casing having a cavity formed therein; and
a liner disposed within the cavity formed of a mixture of powdered heavy metal and powdered binder metal wherein
the percentage of heavy metal in the mixture is within a range of approximately 91.0% to 99.98% by weight.

Claim 2. (Previously Amended) A shaped charge according to claim 1 wherein the heavy metal powder is chosen from the group consisting of tungsten, tantalum, gold, platinum, or any mixture thereof.

Claim 3. (Previously Amended) A shaped charge according to claim 1 wherein the heavy metal consists primarily of tungsten.